

REMARKS/ARGUMENTS

Claims 1-25 are pending with Claims 21-25 being withdrawn.

No amendments are submitted.

The one rejection in the Action is that under 35 USC 102(b) citing Chen US 5,024,680 or page 2 of the present application. Indeed, Chen is discussed on page 2 of the specification. As discussed on page 2 and apparent from reading Chen itself, Chen's coating method involves a minimum of two coating steps. (see page 2, last paragraph of the specification: "a multiple coated diamond grit" and "a first coating layer" "a second metal coating" "[a] third metal layer coating." In contrast, the claimed method involves a single coating step of providing a combination of transition metal and an activation metal, e.g., titanium, vanadium or chromium (see claim 17).

Chen describes applying in a first step an inner layer of zirconium, chromium or titanium by metal vapor deposition (column 3, lines 33 to 63, the examples and claim 1). Thereafter, a second metal layer is applied, again by metal vapor deposition (column 7, the examples and claim 1). Claim 1, in contrast, has a single coating step.

Indeed, in the summary portion of Chen's patent in col. 2, it is stated (emphasis added):

It has been found that applying a metal coating of an oxidation resistant carbide former over a first metal coating of a strong carbide former results in stronger bonds between the metal layers, resulting in improved grit retention in a matrix

As Chen requires two, separate and distinct coating steps, discrete and separate layers of different metals are produced. The inner layer is chromium carbide and the outer layer is a metal in which there is some carbide formation (column 7, lines 5 to 8).

In the claimed process a single coating comprising activation metal bonded to the diamond particles and a transition metal carbide coating is produced.

As is pointed out on page 2 of the specification as filed, the two distinct and separate coating steps of Chen is expensive. Further, the comparative data in the Examples of the present application show the improved carbide coating which is achieved by following the claimed method.

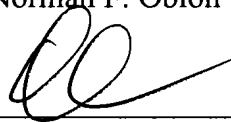
Chen also does not describe, for example, coating a diamond with a particulate mixture of a transition metal and an activation metal (claim 5); a low amount of activation metal relative to the transition metal (claims 6 and 7) and the presence of a gaseous halide in the heat treatment (claim 8).

In view of the above, withdrawal of the rejection is requested.

A Notice of Allowance is also requested.

Respectfully submitted,

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